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AUTHOR Schwartz, Louis; Woods, Robert A.
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ABSTRACT

Actions taken in 1970 by the Federal Communications Commission (FCC) are reviewed and discussed in this paper. These actions include amendment of educational broadcast rules for the first time in 17 years, decisions in the area of educational programing, a decision regarding the ultra high frequency (UHF)-land mobile dilemma, and a promise to initiate proceedings to reserve the 31 Instructional Television Fixed Service (ITFS) channels (2500-2690 megahertz) for exclusive educational and instructional purposes. The Commission also made proposals favorable to the use of satellites by educational interests. Regulations were proposed by the Commission relative to community antenna television (CATV). This is not an exhaustive list; all in all, the Commission, in 1970, took a number of unprecedented actions affecting educators, educational communicators, and communications technology. (MF)

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FCC, CATV, ETV, AND ITFS

Louis Schwartz*
and
Robert A. Woods*

Girl-watchers all-too-often suffer from an all-too-narrow vision. From the ankle to the elbow, you can always find a specialist in anatomical viewing habits.

Commission-watchers -- whether communications engineers communications lawyers, or educational broadcasters -- often suffer from the same limitations. They tend to look at the part rather than the whole.

But every once in a while it is a good idea to take a long look at the entire body, administrative or otherwise.

This year, 1970, is a particularly fine year for FCC viewing, since there have been a number of significant Commission developments which, taken together, suggest the emergence of new Commission attitudes towards educational broadcasting and an emphasis upon the broader field of educational telecommunications. There are some clear indications that the Commission is interesting itself more and more in the regulation of educational broadcast activities. There are also some tentative indications that that the Commission is encouraging educational broadcasters to assume a vital leadership role in the new telecommunications technologies.

*Members of the District of Columbia Bar.

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1970, was, for example, the year in which the Commission amended its educational broadcast rules for the first time in over seventeen years. In the Spring of 1970, the Commission amended its rules regarding the "underwriting" of educational programming. These new rules provide clarification of the permissible scope of program underwriting, which has been for many noncommercial stations one of the few avenues for achievement of self-support and limited financial independence. The Commission's decision confirms that underwriters may properly provide the funds to cover not only the costs involved in the actual production of a program, but also in addition a proportionate share of the operating expenses of the station which are required in order to make the program available to the public. The Commission has also established guidelines to govern the frequency and content of underwriting announcements. The effective date of these new rules has been deferred until November 30, 1970, while the Commission has considered a request by the NAEB for further clarification of these rules.

The Commission, in 1970, has also shown a marked interest in the programming, as well as the underwriting, efforts of educational broadcasters. This was the year that the Commission fined an educational FM station on the East Coast for the broadcast of certain four-letter words and their gerunds which the Com-

mission found to be "indecent" and "patently offensive to millions of listener". In this same year, the Commission imposed a short-term renewal (and also ordered a renewal hearing at the station's request) for an educational FM station on the West Coast which allegedly broadcast "profane, indecent, or obscene language". A formal hearing is now in progress to determine whether that station "exercised proper licensee responsibility in effectuating its policy regarding the suitability of material for broadcast". 1970 was also the year in which the Commission intervened in a State court proceeding to oppose on constitutional grounds the enforcement of a State statute which barred political broadcasting and many forms of controversial-issue programming by noncommercial educational broadcast stations. The Commission, relying heavily upon the Supreme Court's Red Lion decision, urged that:

> the mandate of the Act that the noncommercial educational broadcaster render full service to the public interest "in the larger and more effective use of radio" is significant not simply because the same affirmative burdens of political and other controversial issue coverage are placed on noncommercial educational broadcasters as on commercial licensees, but also because the noncommercial educational stations have already shown themselves to be a most appropriate vehicle for this area of communications.
>
> It is in light of these comprehensive federal requirements concerning political and other controversial issue broadcasting that we are of

> the view that [the State Statute] is an impermissible venture into a federally preempted regulatory area as well as a constitutionally prohibited inhibition on the free speech rights of the people of the State ....

The Commission is at the present time giving active consideration to revision of the programming sections in educational broadcast applications to include specific additional procedures for the ascertainment and fulfillment of community needs and problems. This would constitute the first major revamping of the educational broadcast forms in many years, and would be designed to assure that educational broadcasters are, and remain, attuned to all of the needs and interests, both majority and minority, of the people they serve.

It is true, of course, that these recent Commission decisions in the programming area reach beyond educational broadcasters to the broadcast community in its entirety. But there is significance in the fact that these novel programming precedents have arisen in the context of educational broadcasting. Inevitably, it is the broadcast experimenter and innovator who presents the new programming questions, and attracts the regulatory eyebrow. The educational broadcaster appears to be taking on these new roles and burdens. This is a mark not only of the growing stature of public broadcasting, but also of its growing licensee responsibilities.

The Commission, in the year 1970, has also begun to chart some possible new areas for educational focus outside the broadcast spectrum. In the same year that the Commission has reduced the total amount of television broadcast space for potential noncommercial educational use, it has also moved in the direction of new and enlarged educational participation in non-broadcast frequency regions.

In May, 1970, the Commission released its long-awaited decision in Docket Nos. 18261-18262, regarding the UHF-land mobile dilema. In those proceedings, the Commission concluded that land mobile services should share not more than two of the lower seven UHF channels (Channels 14-20) in the ten largest urbanized areas of the country, and also reallocated frequency space to land mobile interests in the 800-900 MHz range, including the upper UHF Channels 70-83. The Commission rejected proposals by educational interests that substantial reservations for educational broadcasting should be made within the upper UHF range. These educational proposals had been consistent with their traditional expectation that the future development of educational communications technology would depend upon the availability of substantial space in the UHF band. The VHF band had long since been foreclosed to further educational expansion, and expansion in UHF had always been the land of promise.

The Commission recognized that its decisions in Docket Nos. 18261-18262 had deeded much of this "land of promise" to others, and that educators should look elsewhere for the means to serve their goals. The Commission said that "we are convinced that some of the nation's critical needs for instructional and educational media facilities can be met in the 2500-2690 MHz frequency bands", and reaffirmed that its decisions would not prejudice the provision of adequate communications tools which "may be applied to education in the relief of urban problems". Educational organizations such as the NAEB, which sought reconsideration of the Commission's land mobile decision, acknowledged that the upper UHF channels were beyond redemption for exclusive educational purposes, and urged only that the Commission should not take away the UHF channels without providing firm assurances of other frequency blocs for educational growth. The NAEB, for instance, recommended (a) the implementation of low power educational and community assignments within UHF television Channels 14-69, (b) changes in the television station separation criteria (the UHF TV "taboos"), (c) allocation of the 2500-2690 MHz band exclusively to the Instructional Television Fixed Service, and (d) reservation of a minimum of 20% of CATV system capacity for local noncommercial educational and public service use on a free basis. The Commission indicated

that at least the "last three of these matters are under consideration elsewhere, and whatever action is appropriate can be taken there".

In fact, in Docket No. 18262, the Commission announced that, as a partial recompense for the loss of UHF broadcast channels, it would soon initiate a proceeding to "take positive action" to reserve the 31 ITFS channels (2500-2690 MHz) for exclusive educational and instructional purposes. In June, 1970, the Commission released its Notice of Proposed Rule Making in ITFS, but proposed the reservation of only 28 of the 31 ITFS channels. The remaining three channels in Group H would be allocated on an exclusive basis for use in operational fixed television systems. This pending proceeding represents the Commission's long-awaited review to determine "what course of action should be taken to encourage the fullest development" of this band for educational use. A substantial number of educational interests has filed comments in that ITFS proceeding documenting the need for reservation of the entire 31 ITFS channels, and opposing the allocation of any of the ITFS frequencies to non-educators, in order to preserve flexibility for the anticipated future growth of ITFS. Such reservation is essential to permit time for local boards of education, local educational institutions, and other interested groups to conduct surveys, secure necessary appropriations, and coordinate the placement and utilization of these frequencies on

an orderly and comprehensive basis. It does take considerably more time and effort for educational interests to formulate and implement plans for media utilization. Similar considerations guided the Commission in its reservation of channels for educational FM and television purposes, and they should also be at the forefront of the Commission's assessment of present and future needs for ITFS channels. The availability of immediate plans to use all of the ITFS channels in all areas of the country should not be the essential predicate for Commission reservation of all of the ITFS frequencies for instructional purposes. Any Commission action in this proceeding will define the contours of the growth of this service for the coming decade, and the Commission must therefore take into account the likelihood of future demands for such services in these future years.

The steady growth of ITFS has been influenced, as well, by recent Commission actions in the ITFS field. In its First and Second Reports and Orders in Docket No. 18346, the Commission has significantly contributed to the flexibility of ITFS by authorizing response stations, utilizing both voice and non-voice transmissions. These latest instructional communications tools, which became available only in 1969 (voice transmissions), and 1970 (non-voice transmissions), have greatly enhanced the effectiveness and value of

instructional television, and have satisfied a vital need for immediate return information from the teaching station to the transmission point. As a result, more and more educators are realizing the distinct advantages of these systems in the instructional process, and are taking a fresh new look at ITFS. There has not been a sufficient period of time to measure the exact impact of these new ITFS potentialities upon application filings and the ITFS plans of educators, but it is reasonable to predict that the addition of two-way capabilities in ITFS will generate a significant new demand for ITFS systems as an integral component of local education and instructional processes. Moreover, educators are now giving active consideration to proposals to revamp the existing Instructional Television Fixed Service to embrace technological capacities beyond the field of television. Viewed as a comprehensive Instructional Communications Service, and making use of existing authorized ITFS frequencies on an exclusive basis, and to the extent possible, additional frequencies which may be allocated in this Service, possibilities would be enlarged for effective service to the manifold needs of education and instruction. Such an Instructional Communications Service (ICS) would include any form of electronic communication, e.g., television, aural services, electronic data-processed information and two-way communications services.

Paralleling this progress to date of reservation of ITFS frequencies on the ground has been a comparable effort by educators to reserve ITFS frequencies in space. Last month, the Commission modified its recommendations to the Department of State with respect to the U. S. Draft Proposals preparatory to the 1971 World Administrative Radio Conference for Space Telecommunication (WARC-ST). In response to the requests by a large number of educational interests, those recommendations were modified to insure that they would not foreclose the possibility of using the frequency band, 2500-2690 MHz, for the distribution of educational and public service material via satellite. The Commission now proposes that the entire band 2500-2690 MHz should be allocated on a worldwide basis to the communication satellite service, sharing with presently allocated terrestrial services. A footnote associated with the communication-satellite service specifies that the sharing criteria applicable to it and the other sharing services would be such as could be agreed upon between the administrations concerned and affected rather than the finite criteria specified in the radio regulations with respect to the more conventional uses of the communication-satellite service. Further, the rationale cited in the modified Draft Proposals with respect to this band makes it clear that the proposed use of the communication-satellite service would be to sup-

port systems dedicated to the distribution of educational or public service material and/or direct-assignment-multiple-access in remote areas for low-demand users.

Educators had urged that the 2500-2690 MHz band, now utilized for ground transmissions in the ITFS, would have immense and unique benefits for educational space transmissions as well. These frequencies would permit highly efficient and inexpensive communications from space. In addition, utilization of the 2500-2690 MHz band for educational space transmissions has special frequency-management advantages, by permitting shared usage of these frequencies by educators, i.e., transmission from space without interfering with existing or new terrestrial ITFS systems. Space transmissions could be engineered so as to eliminate or minimize interference between existing ITFS systems and space transmission, including the utilization of directional antennas. Space transmissions would appear to be feasible on a noninterference shared-hours basis with terrestrial ITFS facilities. The utility of such signals could be most beneficial in rural areas most difficult to reach by conventional relay, but where indigenous noise is lowest, and where effective, reliable, and regular instructional services are essential. Furthermore, even where interference conflicts or other difficulties are present, negotiations and coordination of such matters among educational parties with common interests

would be much more preferable than an attempted compromise of interests between educators and other terrestrial users with communications needs and desires far removed from the field of education.

This victory, in 1970, before the Commission, represents another and unique achievement by educational interests. At the upcoming WARC Conference at Geneva, where the ultimate decision on world-wide frequency allocations for the next decade will be made, the voice of education will be heard to an unprecedented extent. This emergence of educational telecommunication interests on the international scene is a milestone toward maturity for education.

At the same time, the Commission has taken at least the preliminary steps towards <u>establishment of a domestic communication-satellite system.</u> In March, 1970, implementing to some extent proposals which had been advanced by the Ford Foundation, the Carnegie Foundation, and other educational groups in 1966, it invited the filing of specific applications for domestic satellite systems. Those applications are now in the process of being filed with the Commission. All, or most of these applications, should be on file no later than December 1, 1970. Of special importance to educational interests is the emphasis which the Commission has placed upon sat-

isfaction of noncommercial educational programming and telecommunications needs. Among the specific concerns which the Commission is requiring prospective domestic satellite operators to focus upon are:

> Where the proposed services include television or radio program transmission, the terms and conditions under which satellite channels will be made available for noncommercial educational networks. We note that parties to this proceeding, such as ComSat and the ABC network, have proposed to provide satellite channels without charge for the interconnection of public and instructional broadcasting. We believe this to be in the public interest. Applicants proposing television or radio program transmission services should also address the possibility of realizing a "peoples dividend" to provide some funds for programming by noncommercial educational stations, as suggested by the Ford Foundation.
>
> Applicants proposing multi-purpose or specialized systems should also discuss the terms and conditions under which satellite services will be made available for data and computer usage in meeting the instructional, educational, and administrative requirements of educational institutions.

Multi-purpose telecommunications systems, however, need not await the first domestic satellite launch. For educators have at their disposal, the vast potential afforded by the broad band cable communications technology. For the past four years the Commission has been wrestling with the intricate problems posed by this emerging CATV industry. That wrestling match is far from over, as

is evidenced from the major new Commission CATV proposals which were advanced in July, 1970.

In 1966, when the Commission issued its first comprehensive regulations in the CATV field, it hoped to have settled many of the most pressing problems by its basic rules on carriage, nonduplication protection, and the provision of hearing procedures in top 100 market distant signal cases. Experience quickly proved that the ramifications of CATV outran the regulations. In 1968, the Commission advanced new CATV proposals, including special retransmission procedures and an interim plan designed to protect television operations (although incidentally not educational television) within specific-35 mile zones. In 1970, the Commission proposed a comprehensive inquiry into all aspects of CATV. These matters are pending before the Commission at the present time, with comments due to be filed on December 7, 1970. These new CATV proceedings at the Commission propose new regulations and policies in the areas of CATV ownership, CATV technical standards, Federal-State and local relationships, and a so called CATV "Public Dividend Plan".

The Public Dividend Plan, which is a substitute for the Commission's "retransmission" proposal would permit CATV systems in the top 100 markets, in addition to local signals, to carry four distant independent signals, but would require them to delete commercials carried by the distant signal and replace them with

locally sold commercials with priority accorded to local UHF stations. The system could carry any number of distant noncommercial educational stations

> if no objection is made by the local educational licensee or permittee at the time he is informed of the system's intention to carry the distant stations. Upon request of such licensee or permittee, the CATV would, at its own expense, delete appeals for funds on distant stations and substitute appeals provided by the local entity.

Furthermore, CATV systems in these markets would be required to pay 5 percent of their subscription revenues quarterly to public broadcasting. Furthermore, the Commission states that it "has now accepted the principle that it must make an effort to insure the development of sufficient channel availability on all new CATV systems to serve specific recognized functions", in addition to cablecasting, such as a local government channel, local public access channels, leased channels for commercial operation, and channels devoted to educational and instructional uses. The Commission has inquired whether it is appropriate to specify such channel uses, and whether it should require systems with a capacity of 20 or more channels to set aside half their capacity for such use.

It is incumbent upon educators to formulate and foster their charter for the relationship between cable telecommunications systems and educational telecommunications systems. This must be

done now while the Commission's proposals are still in a formative stage. There seems little doubt that educators should urge the Commission to permit local CATV ownership by local educational broadcast interests. At the present time the Commission has barred such dual ownership by educational television stations and is considering a similar bar regarding local educational radio stations. Such a ban seems totally unrealistic in the light of the possible financial and public interest considerations involved, and should be fought vigorously. Likewise, educators should actively support effective technical standards in CATV, including standards for minimum channel capacity, two-way capability, and reliable performance-test and certification procedures. It is also essential that careful thought be given to the formulation of a national cable grid comparable to the allocations schemes for television and FM radio, so that both urban and rural interests, large city and small city, and majority and minority interests may be assured of a sufficient number of cable channels to serve the needs of all citizens in all parts of the Country.

The Commission has proposed three approaches to the question of Federal-State control:

(i) Federal licensing of all CATV systems;

(ii) Federal regulations along the lines of existing Commission approaches to the problems of CATV.

(iii) Federal regulations of some aspects of CATV, with local regulation of others, under a Federal prescription of standards for local regulators.

Full federal licensing seems the wisest course, but practical budgetary consideration may limit the feasibility of this avenue. If total Federal licensing does, in fact, prove impracticable, then as a minimum, educators should insist upon Federal regulation of major aspects of CATV with a federal prescription of standards for matters left in local hands. Only in this way can a unified master plan be developed for a nationwide cable telecommunications system. The Commission has been moving in the direction of federal standards for local regulators, as evidenced by its program origination decision and its cross-ownership policies. The Commission should be urged to continue in the same direction to avoid a patchwork of diverse and conflicting local regulations and standards.

Of particular interest to educators is the Public Dividend Plan. The Plan touches three major areas of concern. First, in the area of distant signal importation, educators should seek confirmation from the Commission that its proposed new rules would establish a go-no-go rule barring distant-signal educational importations except upon prior approval of the local or state educational entities. Second, in the area of financial support for public and

educational broadcast stations by CATV systems, educators should seek to relate such proposals to broader, more equitable and uniform long-range financing plans which should be implemented by the Congress. Third, in the area of reserved channel capacity for educational and public service purposes, educators should urge the Commission to provide guaranteed and free access to a minimum of twenty percent or more of the capacity of all CATV systems and fifty percent of the capacity of the largest CATV systems (20 channels or more).

The above catalog of Commission actions and proposals in ITFS, satellites, and cable telecommunications is not an exhaustive list. For instance, last July, the Commission clarified its common carrier rules (Part 21) to permit TV transmission in a new band, 2150-2160 MHz. This permits direct color television tranmission via an omni-directional point-to-point microwave system. A licensee may use 6 MHz for transmission and reception of television, to selected viewers, and the remaining 4 MHz may be used for the transmission of teletypewriter, data and/or voice communications. Receiving equipment, located in an office, a school, a laboratory, a municipal building, etc., could be automatically turned on or off from the transmitter so that only the desired group would receive the program intended for it.

These frequency bands may well prove useful to educators, especially in areas where the ITFS frequencies are now in full use and additional frequencies may be needed. The common carrier and profit-motive aspects could pose some practical problems, but it is quite conceivable that some educational groups may be interested in either owning or using such subscriber television systems.

Moreover, just last week the Commission instituted rule making proceedings, designed to permit the use of FM multiplex channels of noncommercial educational FM stations for the purpose of charging tuitions fees for formal courses broadcast over the subcarrier frequencies, e.g., the Educasting proposal. In a separate companion rule making proceeding the Commission is exploring an even wider range of uses of FM multiplex channels. In response to a proposal to permit the use of a teaching device called the "Electrowriter", which uses subcarrier tones to control a writing pen at a remote location as a visual aid in teaching The Commission emphasized that proposals should be limited by the concepts that nothing should be permitted that would tend to inhibit the maximum use of the main channel for true noncommercial educational broadcast service, and, that no uses should be permitted that are not either of a broadcast or "quasi-broadcast" character or closely related to a bona fide educational purpose. If the proposed use is of a type now used by commercial FM stations, and is not related to educa-

tional purposes (as in the case of a background music service), the Commission has inquired as to whether the proposed use should be permitted under any circumstances when the FM station will be paid for it, whether it should be permitted only in the absence of commercial stations that can perform the same function, whether the permissible payment should be limited, and, if, so, how the Commission can appropriately fix and enforce limitations on payment.

The FCC has invited comments in a proceeding designed to determine whether, as a general policy, the Commission should permit the entry of new carriers in the specialized communications field. Educators have a vital stake in a policy which encourages new carriers to enter the data transmission field and other specialized communication services, because competition would have significant beneficial effects for business, government, and education.

All in all, 1970 has been an active year for Commission watchers of the educational communications scene. The Commission has taken a number of unprecedented actions affecting educators, and has begun to reshape the mold by which educational communicators are regulated by the agency and also to refashion the communications technology by which educational communicators can meet the challenge of their new responsibilities.